



TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

Inventor: Vogels et al.

Serial No.: 09/517,898

Docket No.: 2578-3982.2US

312 Amdt. Dated February 23, 2004

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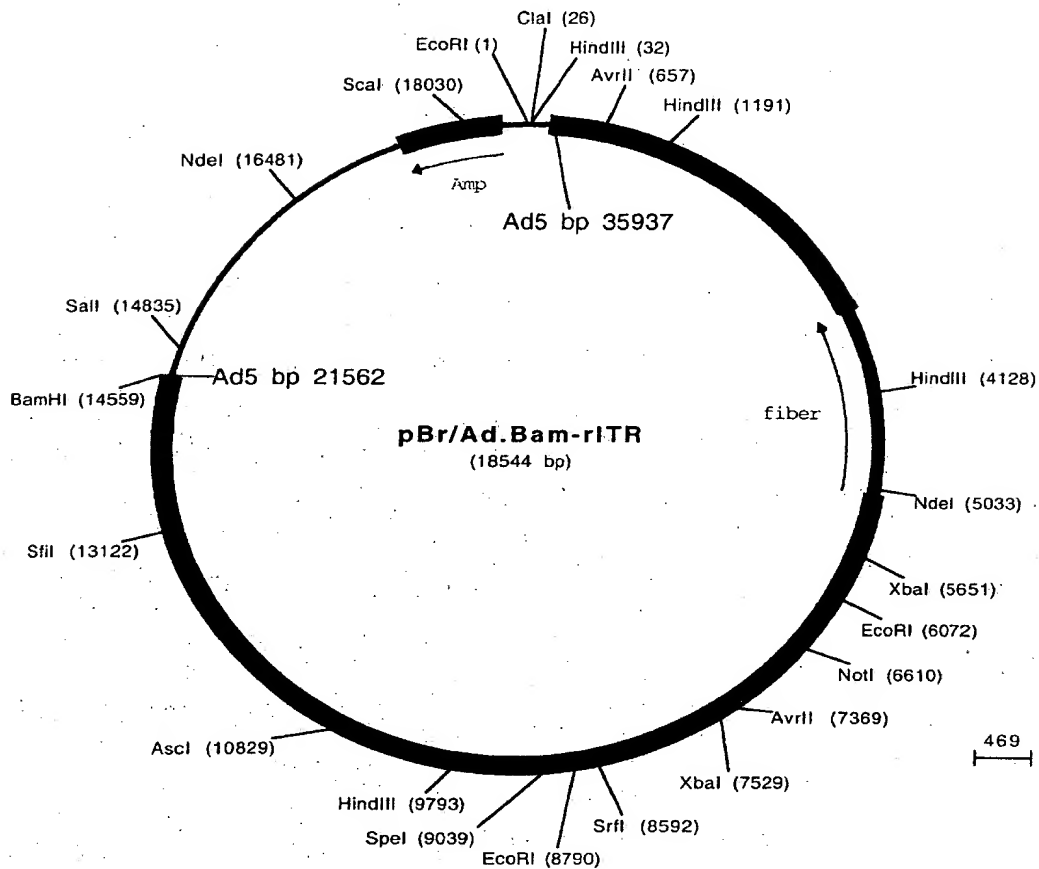
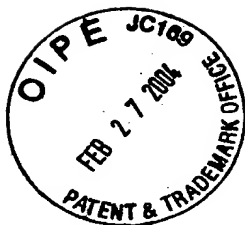


FIG. 1



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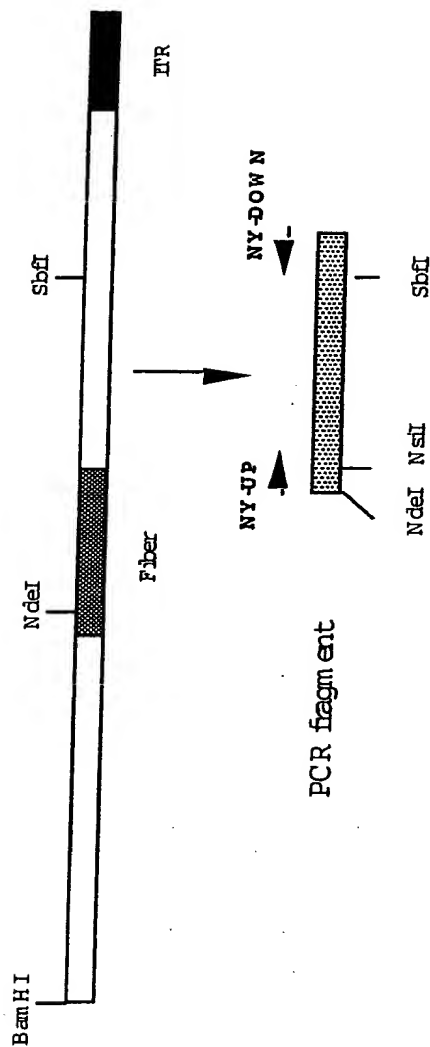
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FIG. 2



NY-UP : 5'-CGA CATATG TAG ATG CAT TAG TTT GTG TTA TGT TTC AAC GTG-3' (SEQ ID NO:36)
NdeI NsiI

NY-DOWN : 5'-GGA GAC CAC TGC CAT GTT G-3' (SEQ ID NO:37)



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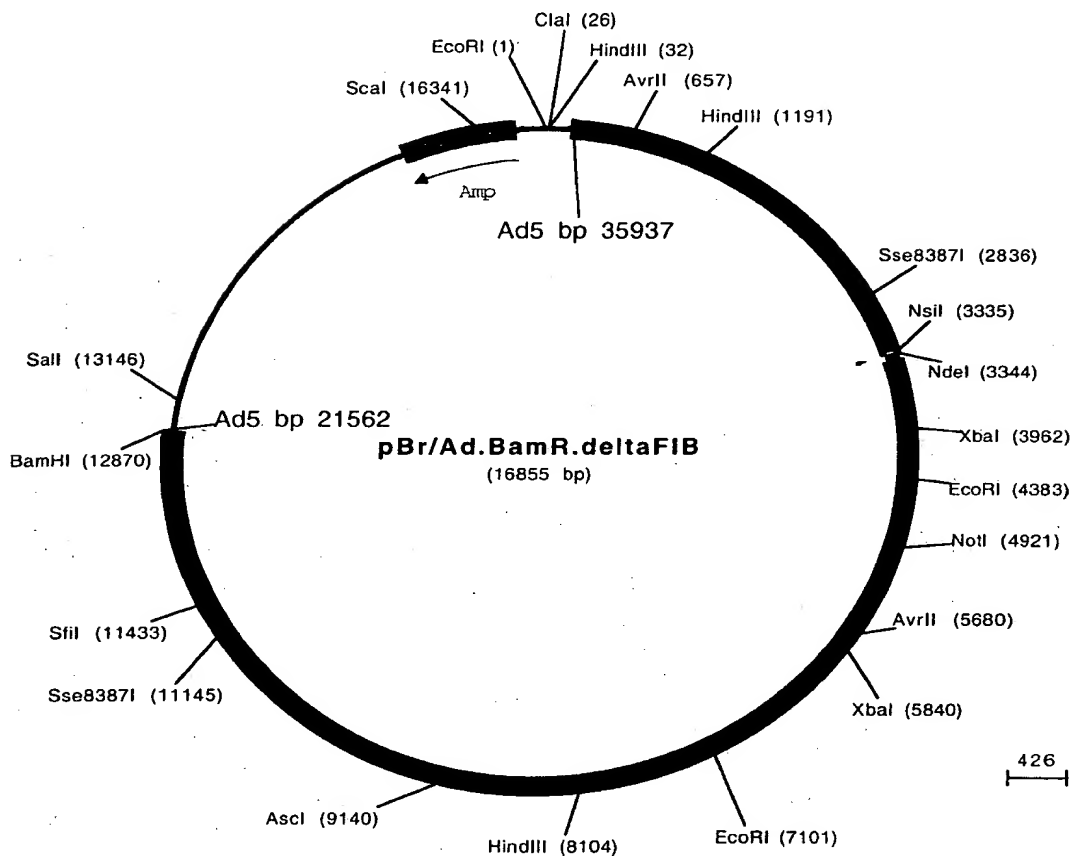
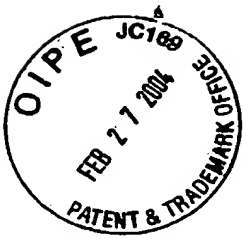


FIG. 3



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FIG. 4

ATGAAGCGCGAAGACCGTCTGAAGATACCTTCAACCCCGTGTATCCATATGAAGATGAAGCAGCT
CACAAACACCCCTTTATAAACCCCTGGTTTCATTTCCCTCAATGGTTTTCACACAAAGCCAGATGGAGT
TCTAACTCTTAAATGTGTAAATCCACTCACTACCGCCAGCGGACCCCTCCAACTTAAAGTTGGAAGC
AGTCTTACAGTAGATACTATCGATGGGTCTTTGGAGGAAATATAACTGCCGAAGCGCCACTCACTA
AACTAACCACTCCATAGGTTTATTAATAGGATCTGGCTTGCAAAACAAAGGATGATAAACCTTTGT
ATCGCTGGGAGATGGGTTGGTAACAAAGGATGATAAATCTATGTTTATCGCTGGGAGATGGGTTAATA
ACAAATAATGATGTAATGTTGCCAACTAGGACATGGCCCTGTGTGACTCTTCCAAATGCTATCA
CCATAGAAACAAACACCTTGTGGACAGCGGCAAAACCAAGCCCAACTGTGTAATTAAGAGGGAGA
AGATTTCCCGAGACTGTAAGCTCACTTTAGTTCTAGTGAAGATGGAGGACTGATAAATGGATACATA
ACATTAATGGGAGCCTCAGAAATATACCTAACACCTTTGTTAAACAAATCAAGTTACAATCGATGTA
ACCTCGCATTTGATAATACTGGCCAAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA
TAAAGACAACCAAAACATGGCTACTGGAACCATACCAAGTCCCAAGGCTTCATGCCCGAGCACACC
GCCTATCCATTTTATAACATAGCCCACTGAGACCCCTAAATGAAGATTACATTTATGGAGAGTGTACT
ACAAATCTACCAATGGAACTCTCTTTCCACTAAAGTTACTGTACACTAAACAGACGTAATGTAGC
TTCTGGAATGGCCCTATGCTATGAATTTTTCATGGTCTCTAAATGCAGAGGAGAGCCCGGAACTACC
GAAGTCACTCTCATACCTCCCCCTTCTTTTTTCTTATATCAGAGAAGATGACTGAATGCATTAG
(SEQ ID NO:32)

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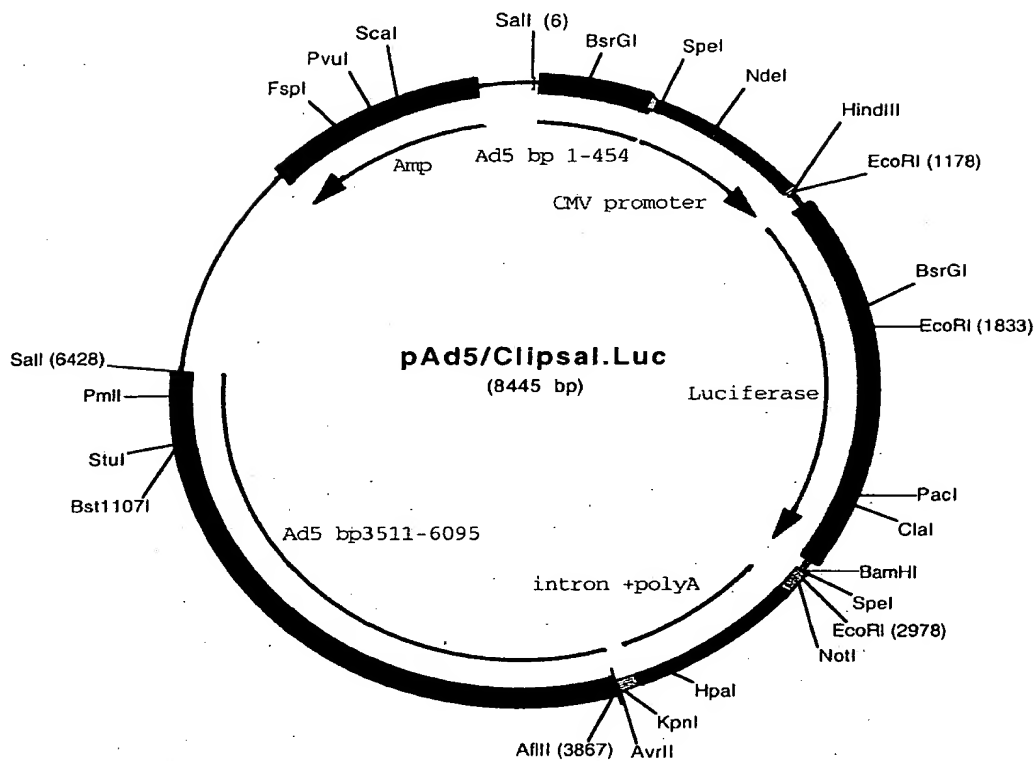
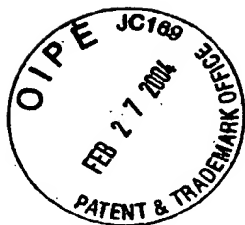
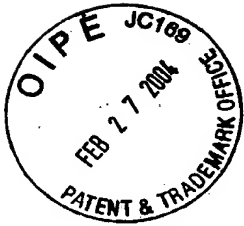


FIG. 5



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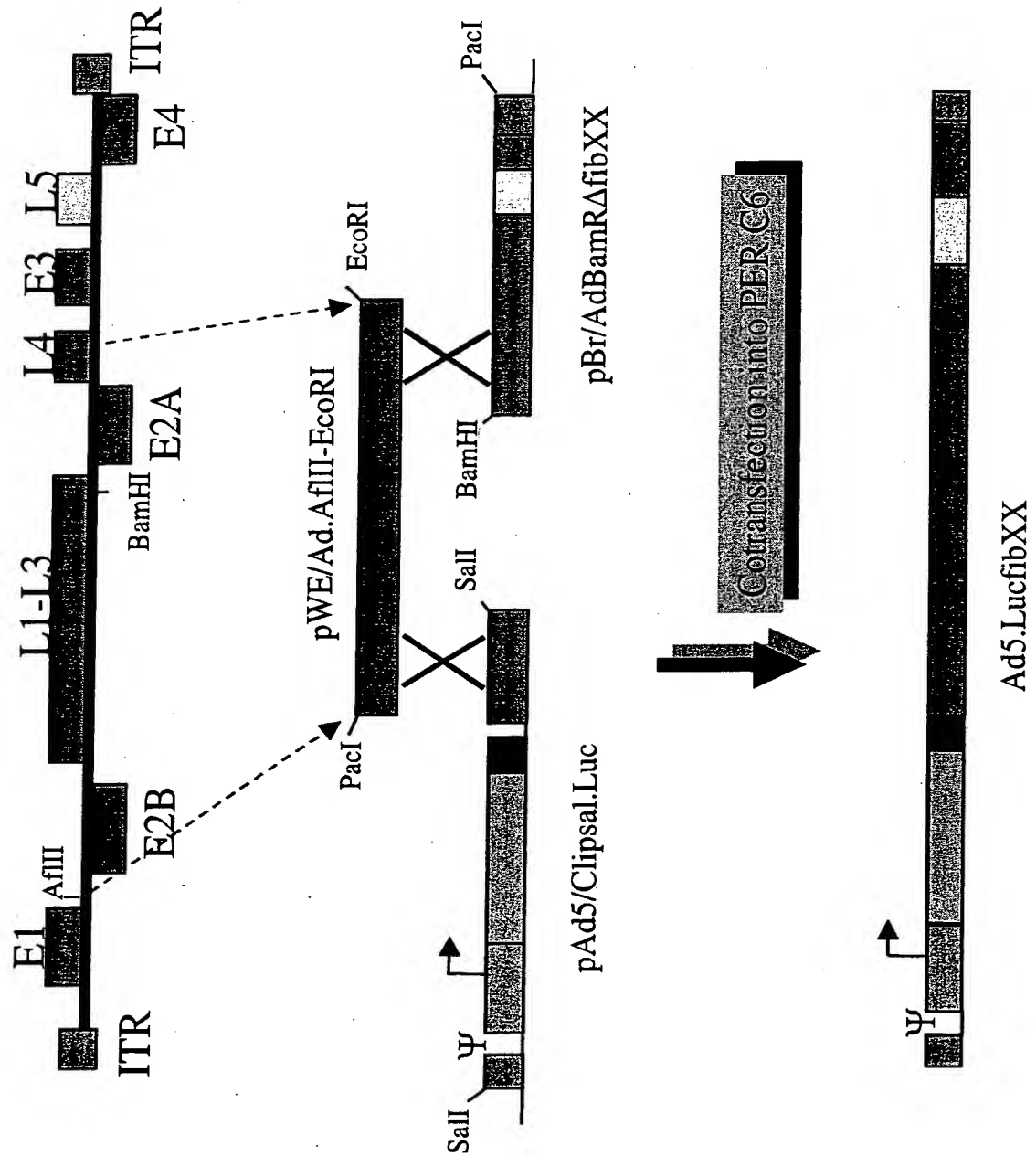
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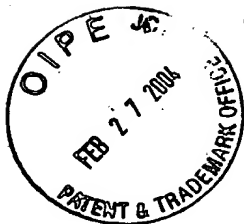
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FIG. 6





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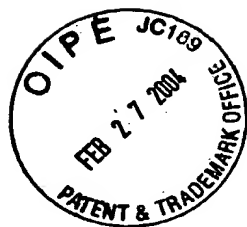
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FIGURE 7A

Alignment Report of alignment DNA, using Clustal method with Weighted residue weight table.
Wednesday, March 31, 1999 18:13

1 ATGGC-CAAACGAGCTCGGCTAAGCAGCTCCTTCAATCCGGTCTACCCCTFiber 16 Genbank SEQ ID NO:33
1 ATGAAGCGGCAGACCGTCTGA-GATACTTCAACCGGTCTATCCCTAd5/16 Fiber DNA SEQ ID NO:38
50 ATGAAGATGAAGCAGCTCACAAACACCCCTTTATAAAACCCCTGGTTTCAATT Fiber 16 Genbank
50 ATGAAGATGAAGCAGCTCACAAACACCCCTTTATAAAACCCCTGGTTTCAATTAd5/16 Fiber DNA
100 TCCTCAAAATGGTTTTTGCAAAAGCCCAAGATGGAGTTCTAACTCTTAAATG Fiber 16 Genbank
100 TCCTCAAAATGGTTTTTGCAAAAGCCCAAGATGGAGTTCTAACTCTTAAATGAd5/16 Fiber DNA
150 TGTTAATCCACTCACTACCGCCAGCGGACCCCTCCAACTTAAAGTTGGAA Fiber 16 Genbank
150 TGTTAATCCACTCACTACCGCCAGCGGACCCCTCCAACTTAAAGTTGGAAAd5/16 Fiber DNA
200 GCAGTCTTACAGTAGATACTATCGATGGGTCTTTGGAGGAAATAAAT Fiber 16 Genbank
200 GCAGTCTTACAGTAGATACTATCGATGGGTCTTTGGAGGAAATAAATAd5/16 Fiber DNA
250 GCCGAGCGCCACTCACTAAACTAACTCCATAGGTTTATTAATAGG Fiber 16 Genbank
250 GCCGAGCGCCACTCACTAAACTAACTCCATAGGTTTATTAATAGGAd5/16 Fiber DNA
300 ATCTGGCTTGCAAAACAAAGGATGATAAATTTGTTATCGCTGGGAGATG Fiber 16 Genbank
300 ATCTGGCTTGCAAAACAAAGGATGATAAATTTGTTATCGCTGGGAGATGAd5/16 Fiber DNA
350 GGTGGTTAAACAAAGGATGATAAATTTGTTATCGCTGGGAGATGGGTTA Fiber 16 Genbank
350 GGTGGTTAAACAAAGGATGATAAATTTGTTATCGCTGGGAGATGGGTTAAd5/16 Fiber DNA
400 TAAACAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTGTT Fiber 16 Genbank
400 TAAACAAAATGATGTACTATGTGCCAAACTAGGACATGGCCTTGTGTTAd5/16 Fiber DNA
450 TGACTCTTCCAAATGGCTATCACCATAGAAAACACACCTTGTGGACAGGCG Fiber 16 Genbank
450 TGACTCTTCCAAATGGCTATCACCATAGAAAACACACCTTGTGGACAGGCGAd5/16 Fiber DNA
500 CAAACCAAGCGCCAACTGTGTAATTAAAGAGGGAGAAAGATTTCCCAAGAC Fiber 16 Genbank
500 CAAACCAAGCGCCAACTGTGTAATTAAAGAGGGAGAAAGATTTCCCAAGACAd5/16 Fiber DNA
550 TGTAAAGCTCACTTGTAGTTCTAGTGAAGAAATGGAGGACTGATAAATGGATA Fiber 16 Genbank
550 TGTAAAGCTCACTTGTAGTTCTAGTGAAGAAATGGAGGACTGATAAATGGATAAd5/16 Fiber DNA



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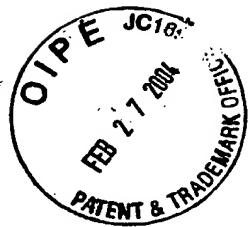
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FIG. 7B

600 CATAACATTAAATGGGAGCCCTCAGAAATATACTAACACCTTGTTTAAACAACA Fiber 16 Genbank
600 CATAACATTAAATGGGAGCCCTCAGAAATATACTAACACCTTGTTTAAACAACA Ad5/16 Fiber DNA
650 ATCAAAGTTACAAATCGATGTAAACCTCGCATTTGATAAATACTGGCCCAAATTT Fiber 16 Genbank
650 ATCAAAGTTACAAATCGATGTAAACCTCGCATTTGATAAATACTGGCCCAAATTT Ad5/16 Fiber DNA
700 ATTAACCTTACCTATCATCCCTTAAAGTAACCTGAACCTTAAAGACACAACA Fiber 16 Genbank
700 ATTAACCTTACCTATCATCCCTTAAAGTAACCTGAACCTTAAAGACACAACA Ad5/16 Fiber DNA
750 AAACATGGCTACTGGAAACCATAAACCAAGTGCCCAAGGCTTCATGCCCAACA Fiber 16 Genbank
750 AAACATGGCTACTGGAAACCATAAACCAAGTGCCCAAGGCTTCATGCCCAACA Ad5/16 Fiber DNA
800 CCACCGCCTATCCATTATTAACATACGACCACTGAGACCCCTAAATGAAGAT Fiber 16 Genbank
800 CCACCGCCTATCCATTATTAACATACGACCACTGAGACCCCTAAATGAAGAT Ad5/16 Fiber DNA
850 TACATTTATGGAGAGTGTTACTACAAATCTACCAATGGAACCTCTCTTCC Fiber 16 Genbank
850 TACATTTATGGAGAGTGTTACTACAAATCTACCAATGGAACCTCTCTTCC Ad5/16 Fiber DNA
900 ACTAAAAGTTACTGTCACACTAAACAGACGTAAGTTAGCTTCTGGAAATGG Fiber 16 Genbank
900 ACTAAAAGTTACTGTCACACTAAACAGACGTAAGTTAGCTTCTGGAAATGG Ad5/16 Fiber DNA
950 CCTATGCTATGAAATTTTTCATGGTCTCTAAATGCAGAGGAAAGCCCGGAA Fiber 16 Genbank
950 CCTATGCTATGAAATTTTTCATGGTCTCTAAATGCAGAGGAAAGCCCGGAA Ad5/16 Fiber DNA
1000 ACTACCGAAGTCACTCTCAATACCTCCCTCTCTTTTCTTATATCAG Fiber 16 Genbank
1000 ACTACCGAAGTCACTCTCAATACCTCCCTCTCTTTTCTTATATCAG Ad5/16 Fiber DNA
1050 AGAAGATGACTGA
1050 AGAAGATGACTGAATGCATTAGTTTGTGTTATGTTTCAACGTGTTTATTT Fiber 16 Genbank
1050 AGAAGATGACTGAATGCATTAGTTTGTGTTATGTTTCAACGTGTTTATTT Ad5/16 Fiber DNA
1062
1100 TCAATTG
Fiber 16 Genbank
Ad5/16 Fiber DNA

Decoration 'Decoration #1': Box residues that differ from Fiber 16 Genbank.



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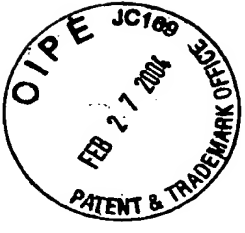
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FIG. 7C

Alignment Report of alignment.prot, using Clustal method with PAM250 residue weight table.
Wednesday, March 31, 1999 16:19

1	M	A	K	R	A	R	L	S	S	-	S	F	N	P	V	Y	P	Y	E	D	E	S	S	S	Q	H	P	F	I	N	genbank Fiber 16	(SEQ ID NO:35)
1	M	K	R	A	R	L	S	S	E	D	T	F	N	P	V	Y	P	Y	E	D	E	S	S	S	Q	H	P	F	I	N	chimeric Ad5/Fib16	(SEQ ID NO:34)
30	P	G	F	I	S	S	N	G	F	A	Q	S	P	D	G	V	L	T	L	K	C	V	N	P	L	T	T	A	S	G	genbank Fiber 16	
30	P	G	F	I	S	S	N	G	F	A	Q	S	P	D	G	V	L	T	L	K	C	V	N	P	L	T	T	A	S	G	chimeric Ad5/Fib16	
60	P	L	Q	L	K	V	G	S	S	L	T	V	D	T	I	D	G	S	L	E	E	N	I	T	A	A	A	P	L	T	genbank Fiber 16	
60	P	L	Q	L	K	V	G	S	S	L	T	V	D	T	I	D	G	S	L	E	E	N	I	T	A	A	A	P	L	T	chimeric Ad5/Fib16	
90	K	T	N	H	S	I	G	L	L	I	G	S	G	L	Q	T	K	D	D	K	L	C	L	S	L	G	D	G	L	V	genbank Fiber 16	
90	K	T	N	H	S	I	G	L	L	I	G	S	G	L	Q	T	K	D	D	K	L	C	L	S	L	G	D	G	L	V	chimeric Ad5/Fib16	
120	T	K	D	D	K	L	C	L	S	L	G	D	G	L	I	T	K	N	D	V	L	C	A	K	L	G	H	G	L	V	genbank Fiber 16	
120	T	K	D	D	K	L	C	L	S	L	G	D	G	L	I	T	K	N	D	V	L	C	A	K	L	G	H	G	L	V	chimeric Ad5/Fib16	
150	F	D	S	S	N	A	I	T	I	E	N	N	T	L	W	T	G	A	K	P	S	A	N	C	V	I	K	E	G	E	genbank Fiber 16	
150	F	D	S	S	N	A	I	T	I	E	N	N	T	L	W	T	G	A	K	P	S	A	N	C	V	I	K	E	G	E	chimeric Ad5/Fib16	
180	D	S	P	D	C	K	L	T	L	V	L	V	K	N	G	G	L	I	N	G	Y	I	T	L	M	G	A	S	E	Y	genbank Fiber 16	
180	D	S	P	D	C	K	L	T	L	V	L	V	K	N	G	G	L	I	N	G	Y	I	T	L	M	G	A	S	E	Y	chimeric Ad5/Fib16	
210	T	N	T	L	F	K	N	N	Q	V	T	I	D	V	N	L	A	F	D	N	T	G	Q	I	I	T	Y	L	S	S	genbank Fiber 16	
210	T	N	T	L	F	K	N	N	Q	V	T	I	D	V	N	L	A	F	D	N	T	G	Q	I	I	T	Y	L	S	S	chimeric Ad5/Fib16	
240	L	K	S	N	L	N	F	K	D	N	Q	N	M	A	T	G	T	I	T	S	A	K	G	F	M	P	S	T	T	A	genbank Fiber 16	
240	L	K	S	N	L	N	F	K	D	N	Q	N	M	A	T	G	T	I	T	S	A	K	G	F	M	P	S	T	T	A	chimeric Ad5/Fib16	
270	Y	P	F	I	T	Y	A	T	E	T	L	N	E	D	Y	I	Y	G	E	C	Y	Y	K	S	T	N	G	T	L	F	genbank Fiber 16	
270	Y	P	F	I	T	Y	A	T	E	T	L	N	E	D	Y	I	Y	G	E	C	Y	Y	K	S	T	N	G	T	L	F	chimeric Ad5/Fib16	
300	P	L	K	V	T	V	T	L	N	R	R	M	L	A	S	G	M	A	Y	A	M	N	F	S	W	S	L	N	A	E	genbank Fiber 16	
300	P	L	K	V	T	V	T	L	N	R	R	M	L	A	S	G	M	A	Y	A	M	N	F	S	W	S	L	N	A	E	chimeric Ad5/Fib16	
330	E	A	P	E	T	T	E	V	T	L	I	T	S	P	F	F	F	S	Y	I	R	E	D	D						genbank Fiber 16		
330	E	A	P	E	T	T	E	V	T	L	I	T	S	P	F	F	F	S	Y	I	R	E	D	D						chimeric Ad5/Fib16		

Decoration #1': Box residues that differ from genbank Fiber 16 .



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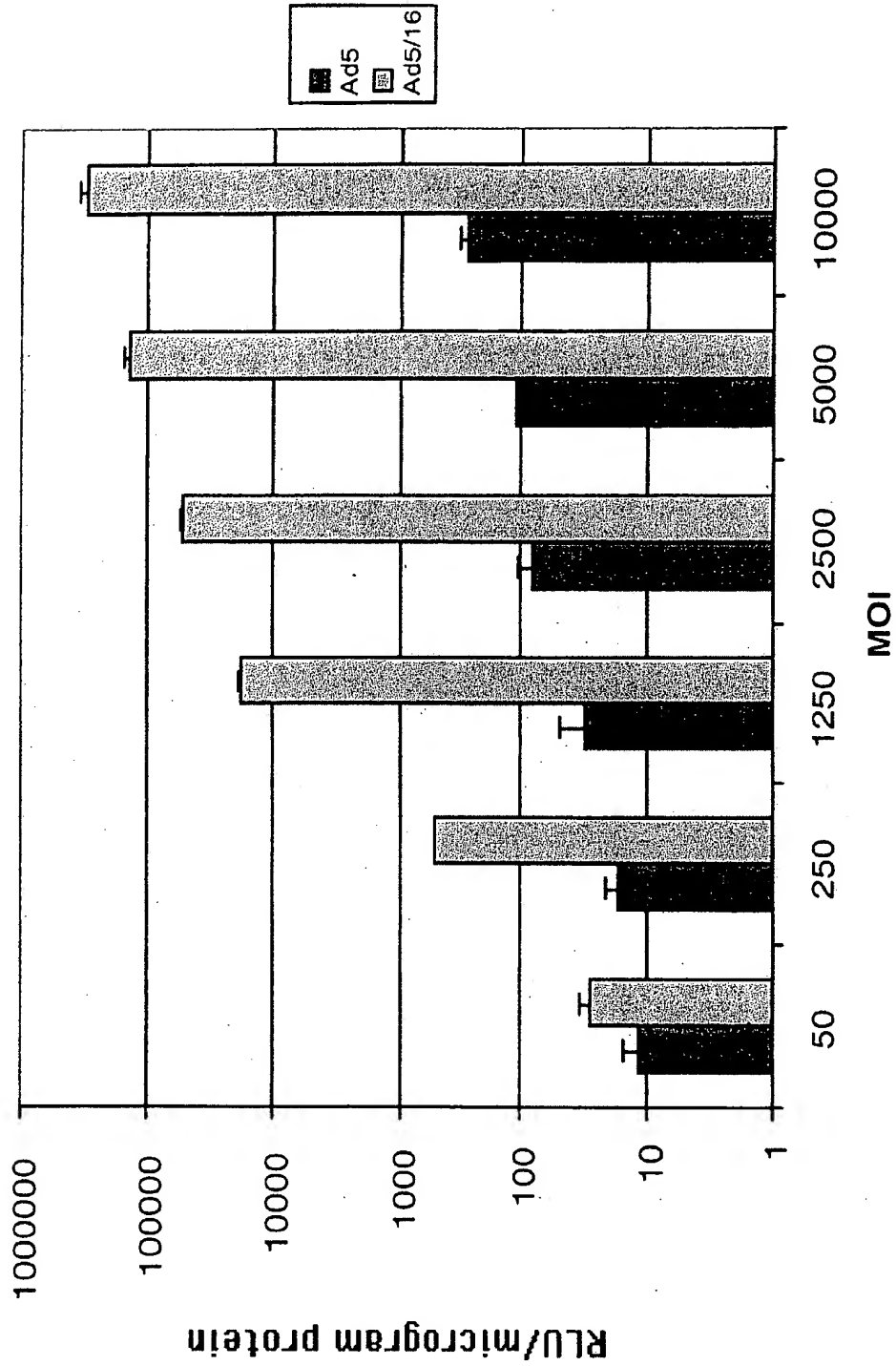
Inventor: Vogels et al.

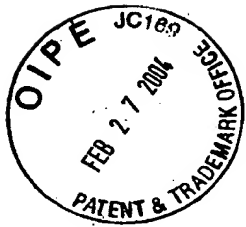
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FIG. 8





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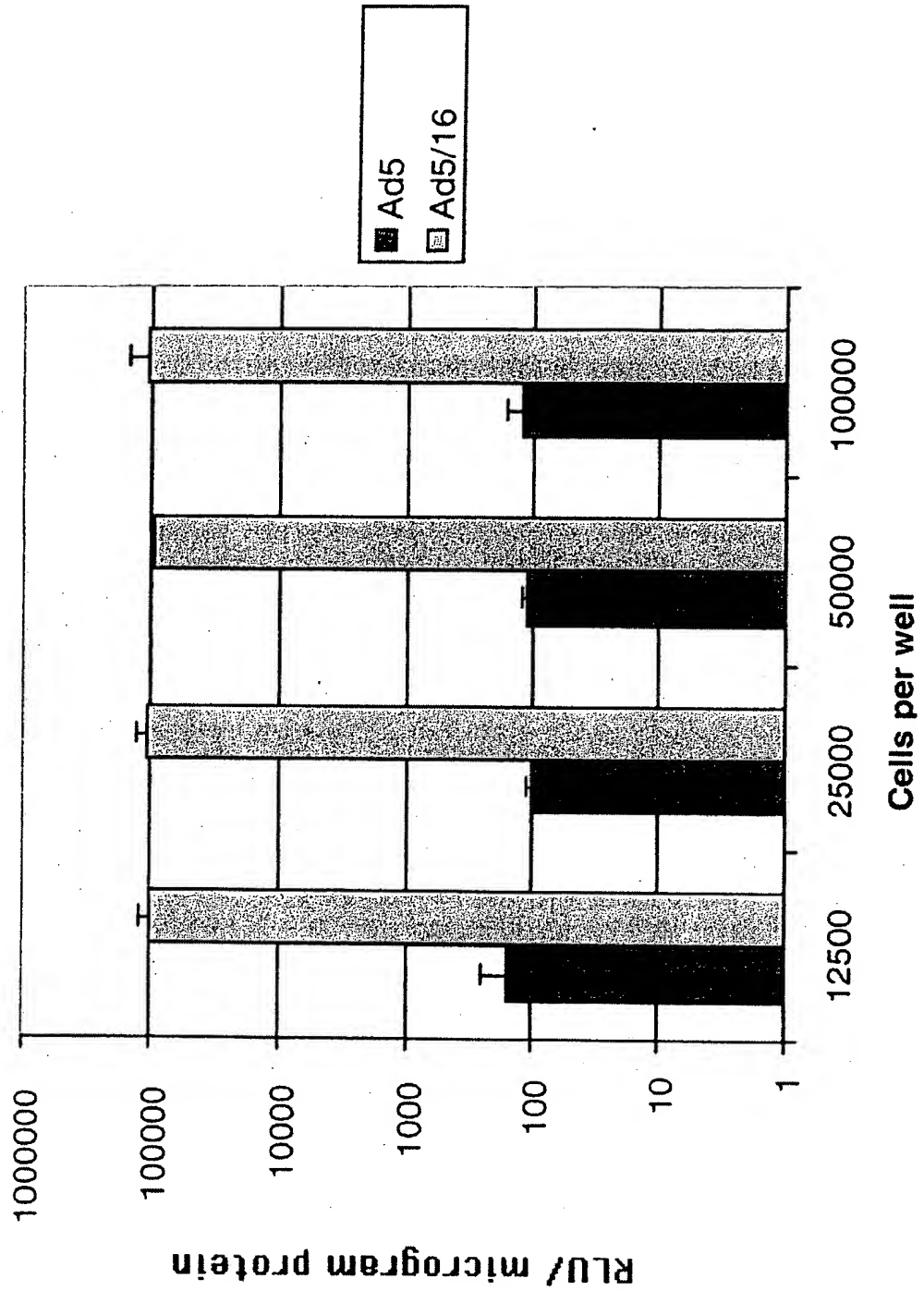
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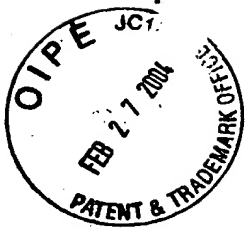
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FIG. 9





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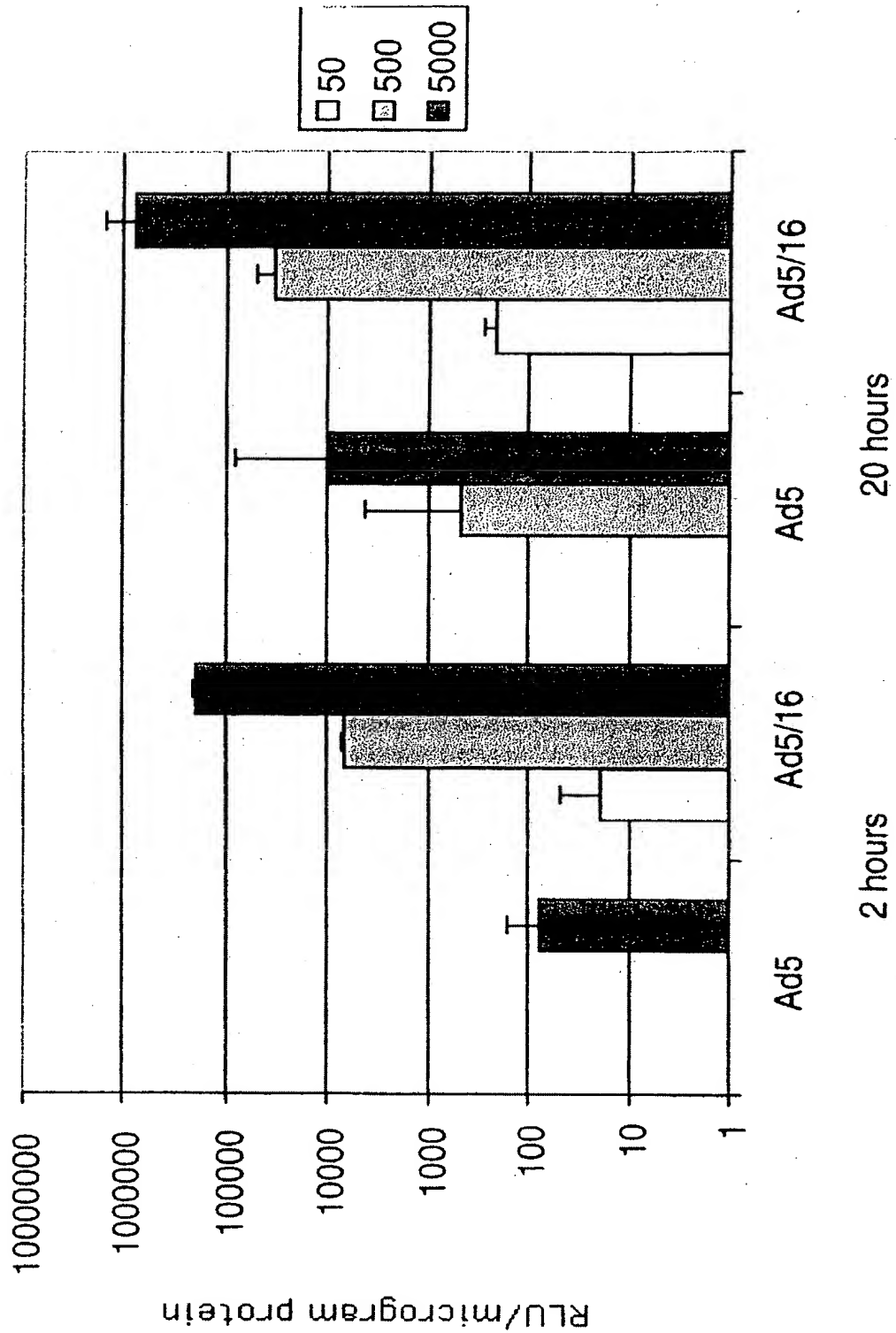
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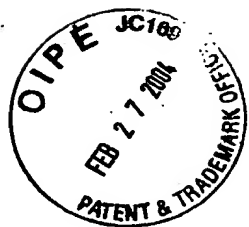
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FIG. 10





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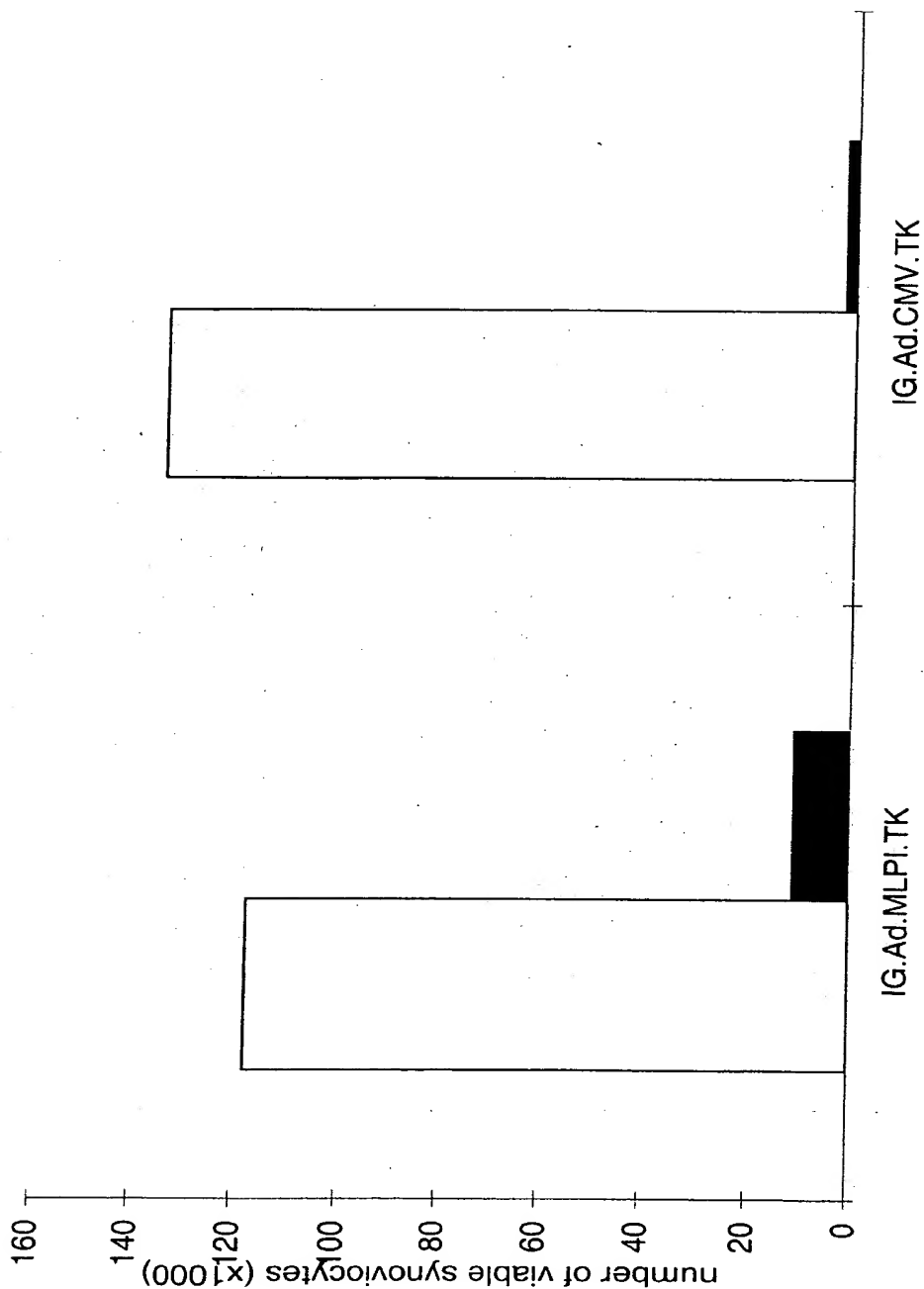
Docket No.: 2578-3982.2US

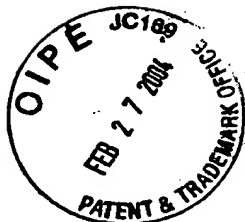
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FIG. 11

Synoviocytes infected with Ad.TK





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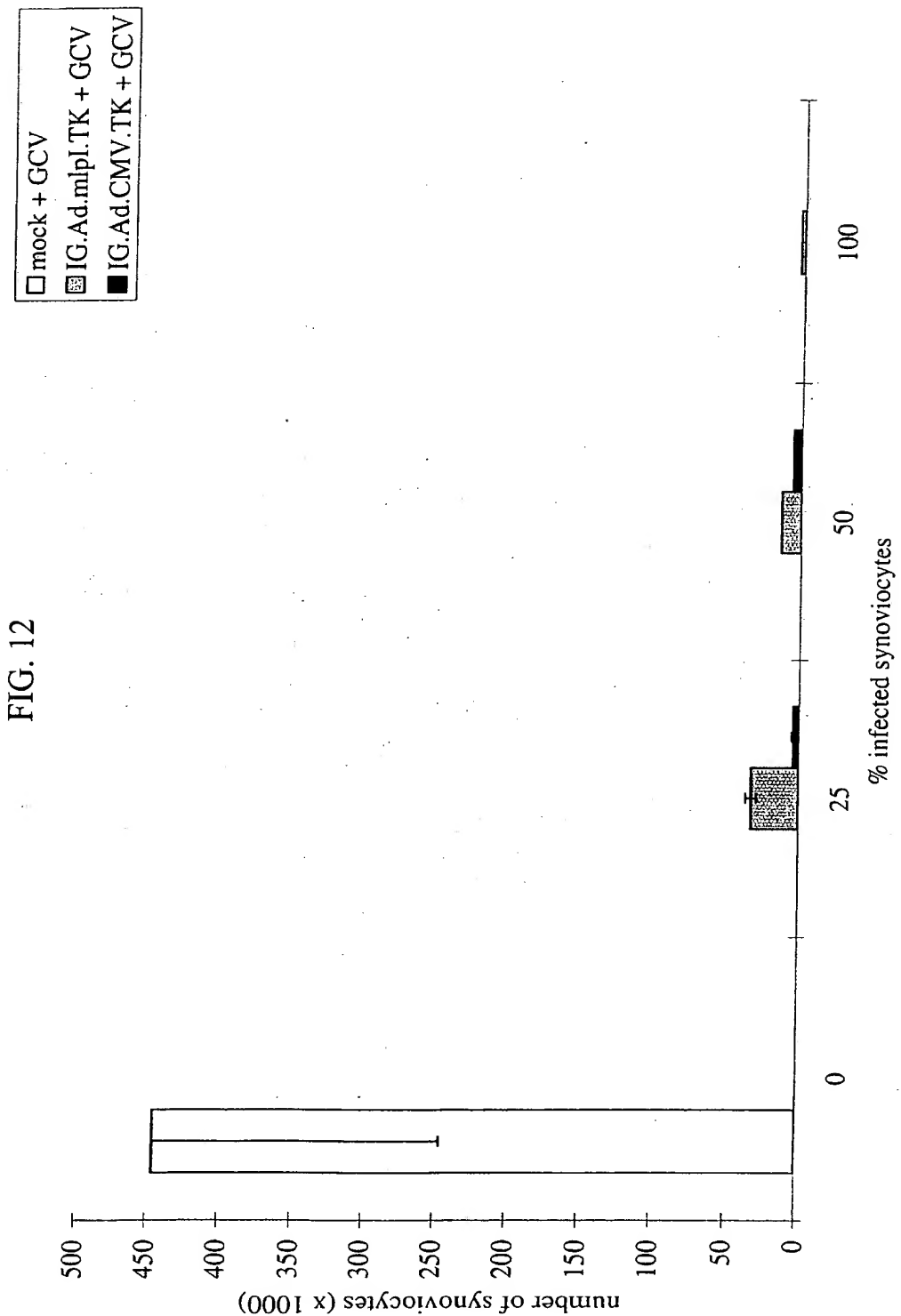
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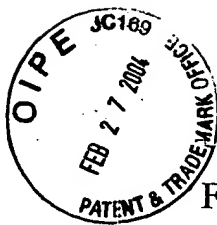


FIG. 13A

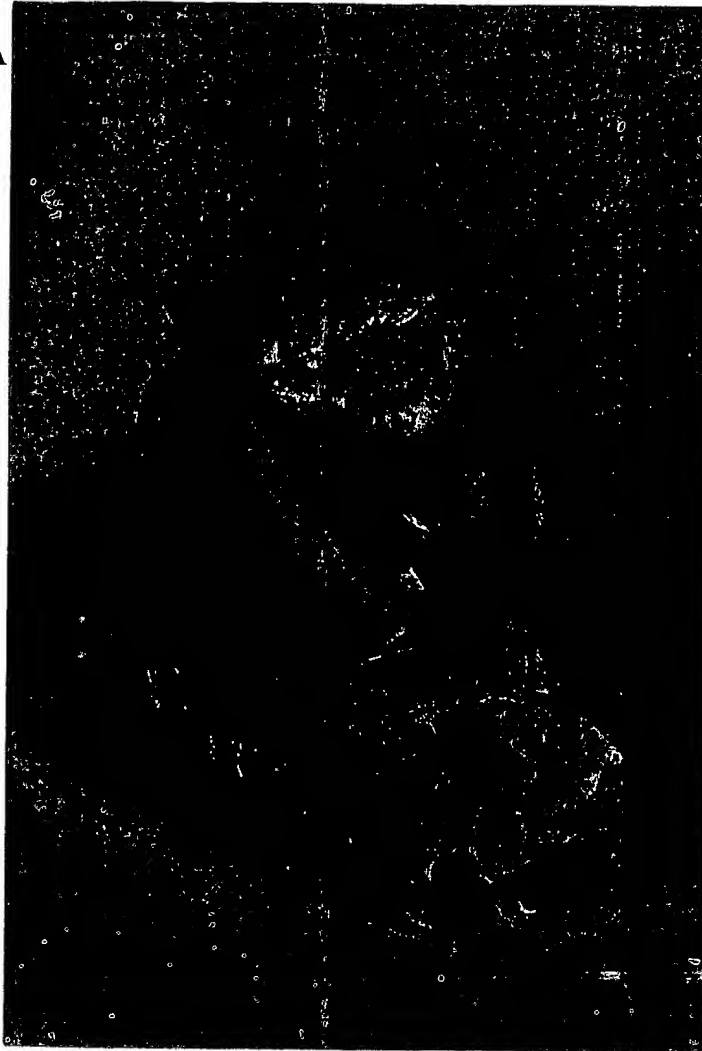
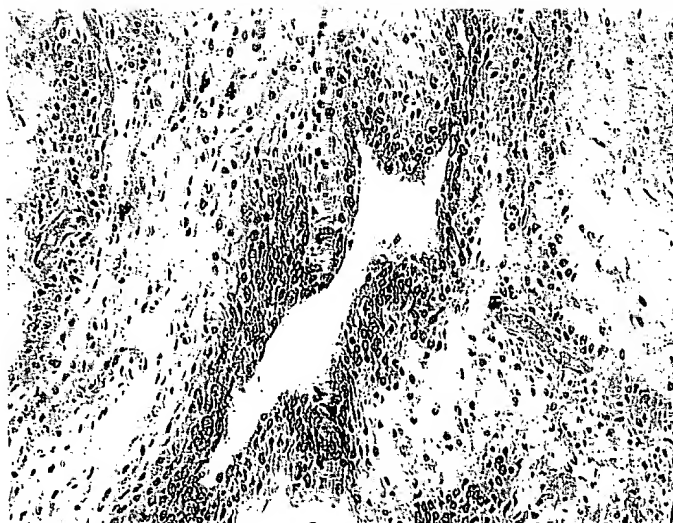
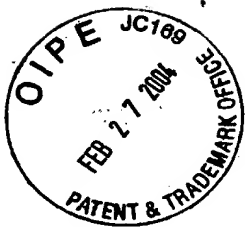


FIG. 13B





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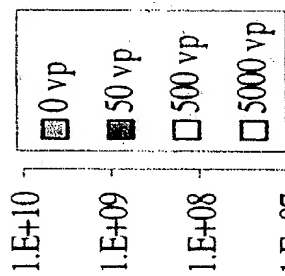
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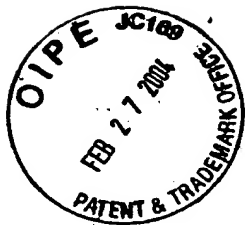
FIG. 14



1.E+10
1.E+09
1.E+08
1.E+07
1.E+06
1.E+05
1.E+04
1.E+03
1.E+02
1.E+01
1.E+00

Fig 5

Fig 16



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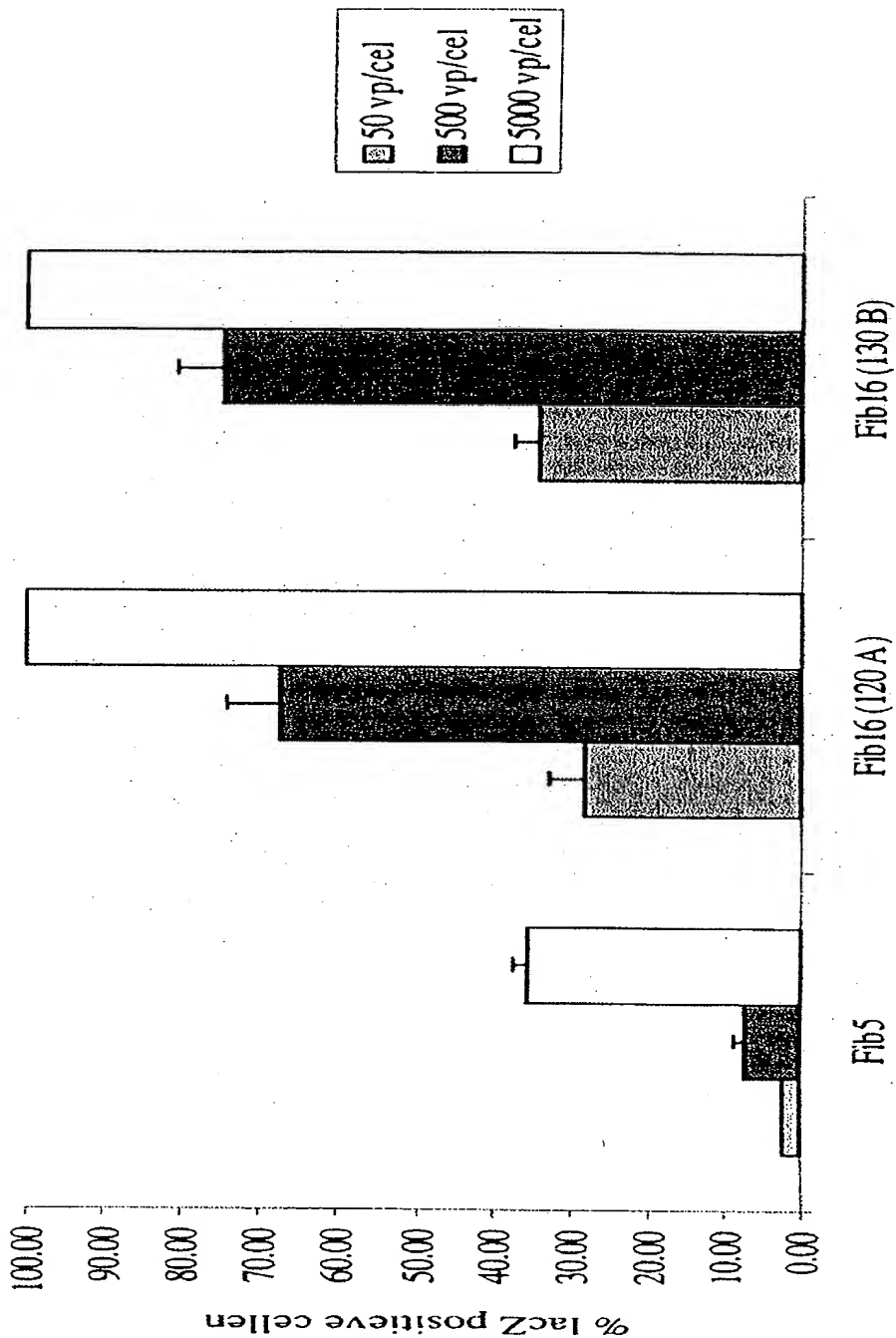
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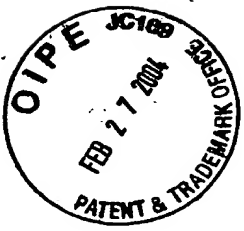
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FIG. 15





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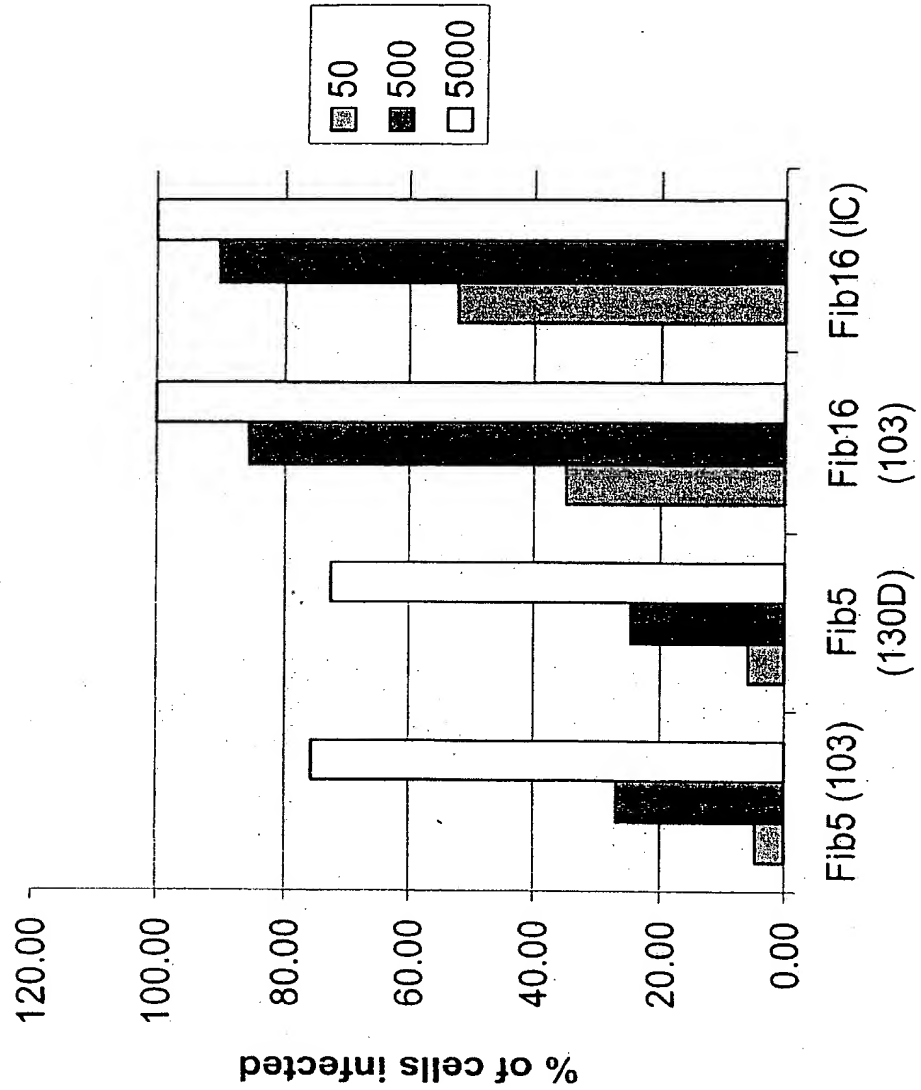
Inventor: Vogels et al.

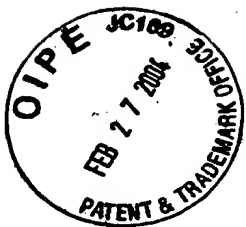
Serial No.: 09/517,898 Docket No.: 2578-3982.2US

312 Amdt. Dated February 23, 2004

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FIG. 16A





TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

Inventor: Vogels et al.

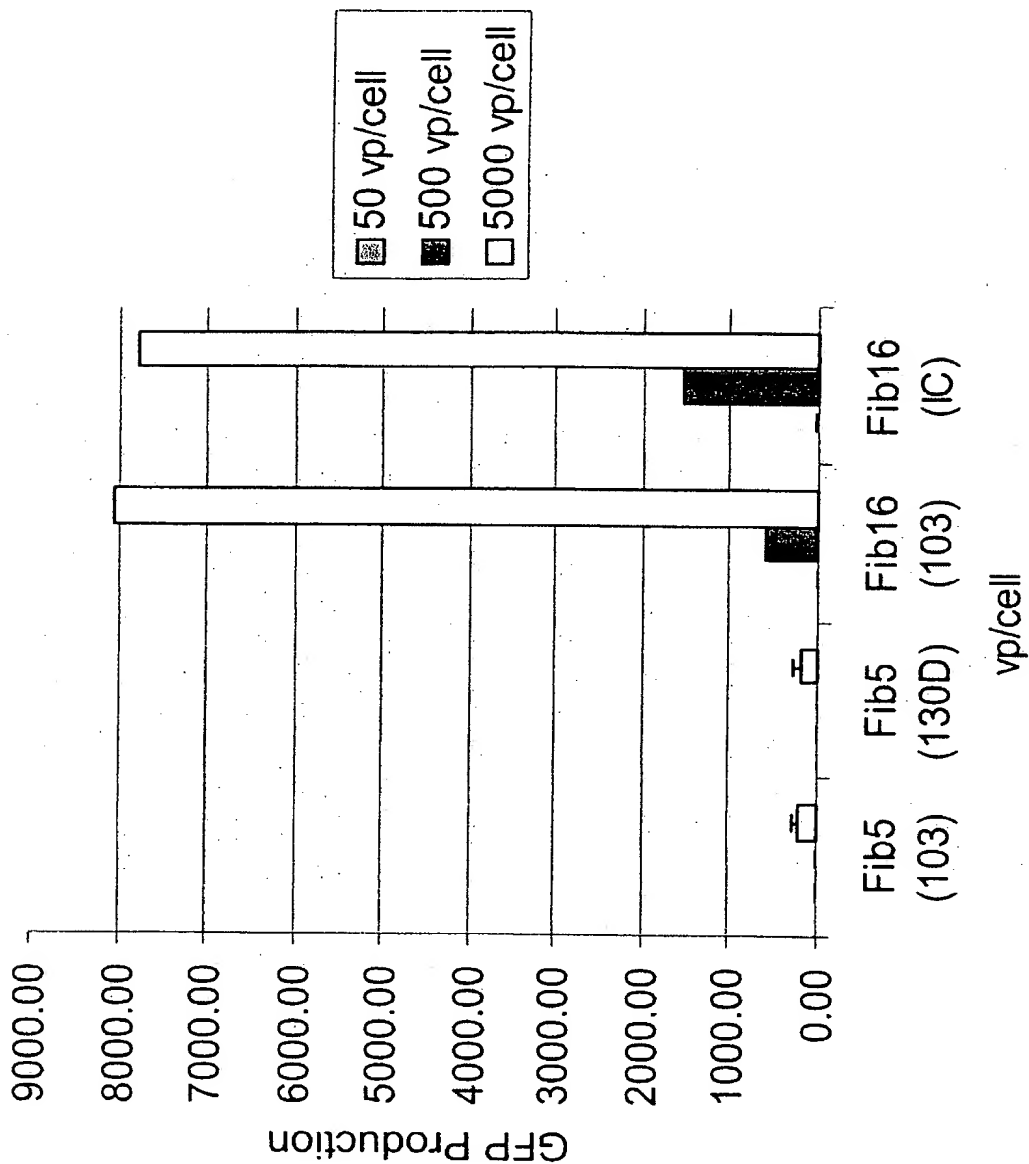
Serial No.: 09/517,898

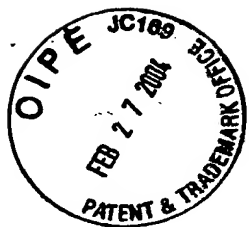
Docket No.: 2578-3982.2US

312 Amdt. Dated February 23, 2004

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FIG. 16B





TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

Inventor: Vogels et al.

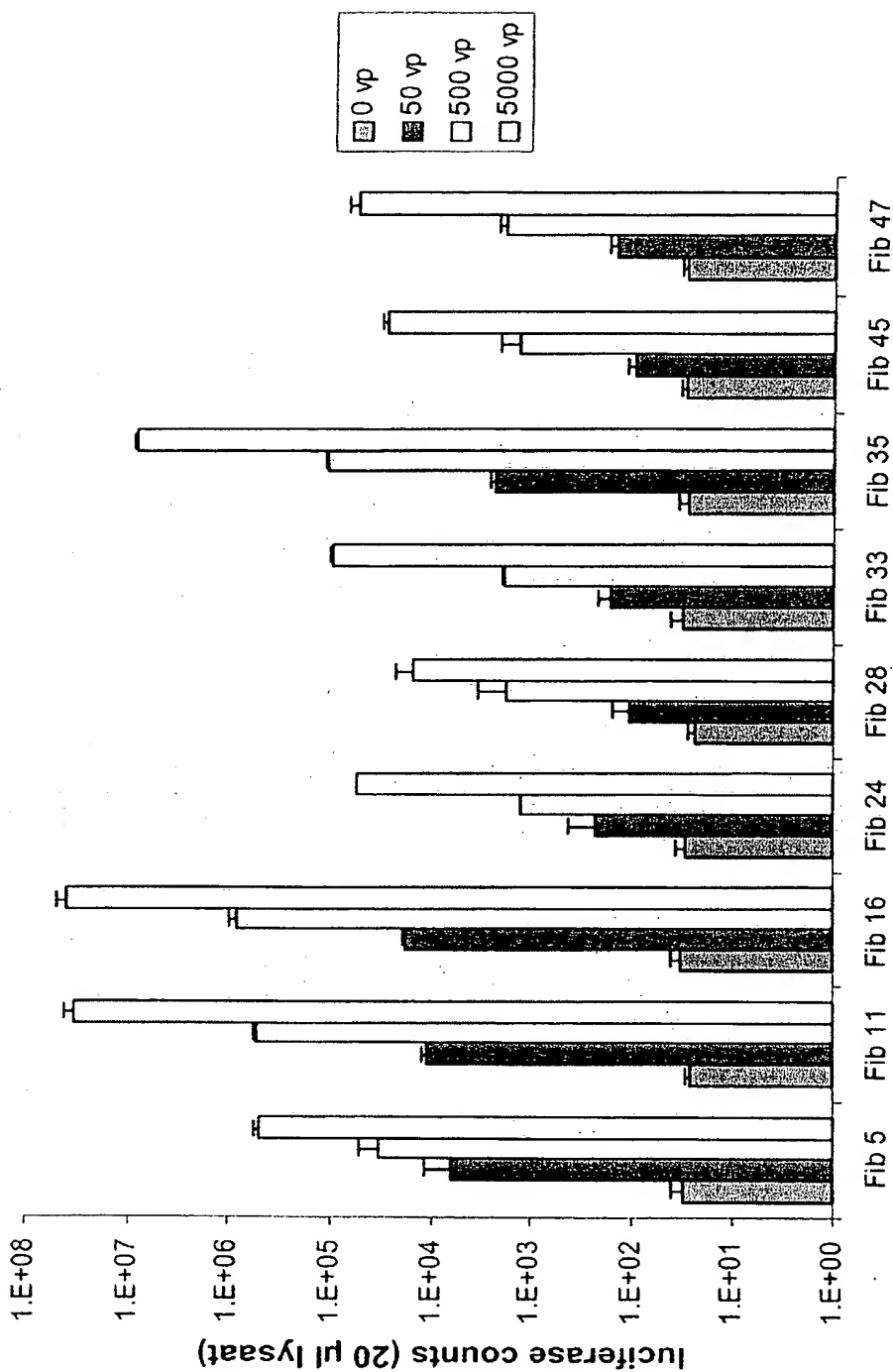
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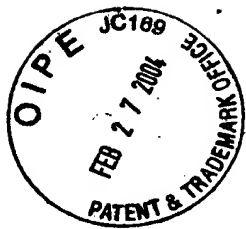
Docket No.: 2578-3982.2US

312 Amdt. Dated February 23, 2004

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FIG. 17





TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

Inventor: Vogels et al.

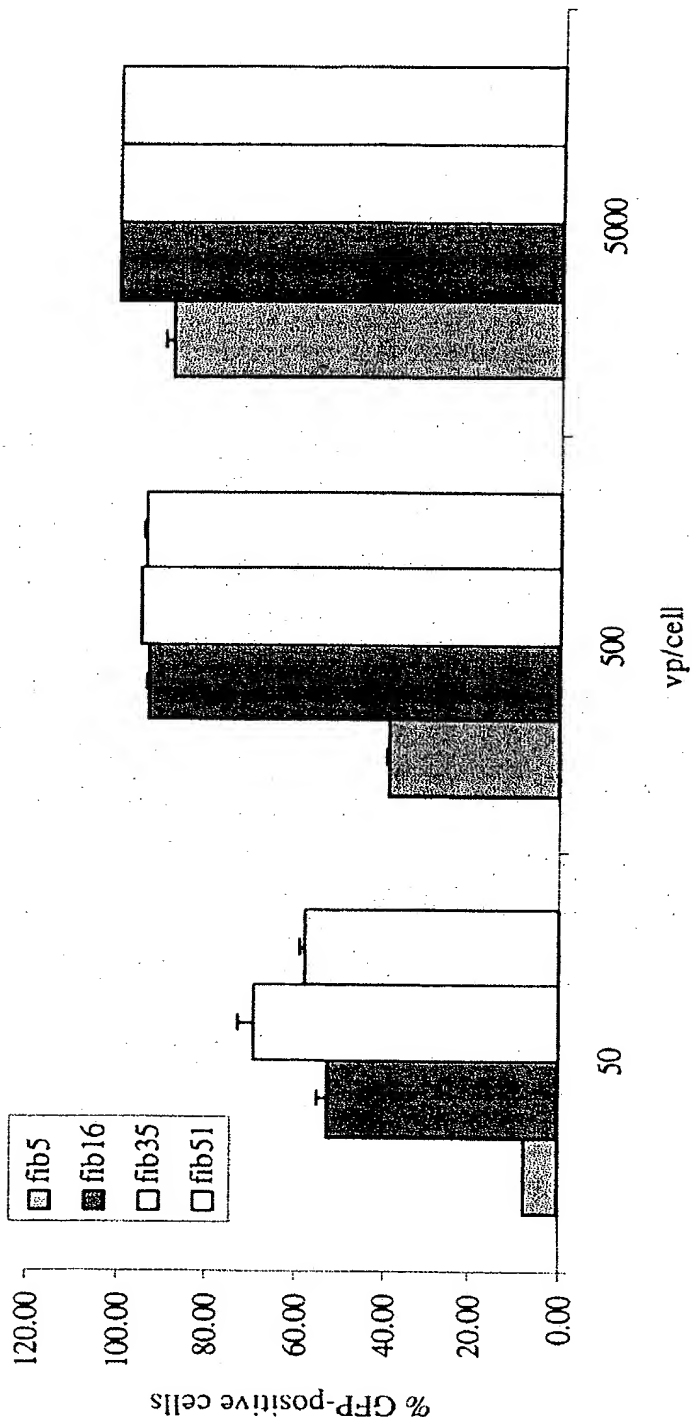
Serial No.: 09/517,898

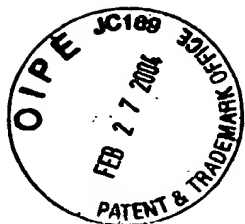
Docket No.: 2578-3982.2US

312 Amdt. Dated February 23, 2004

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FIG. 18A





TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

Inventor: Vogels et al.

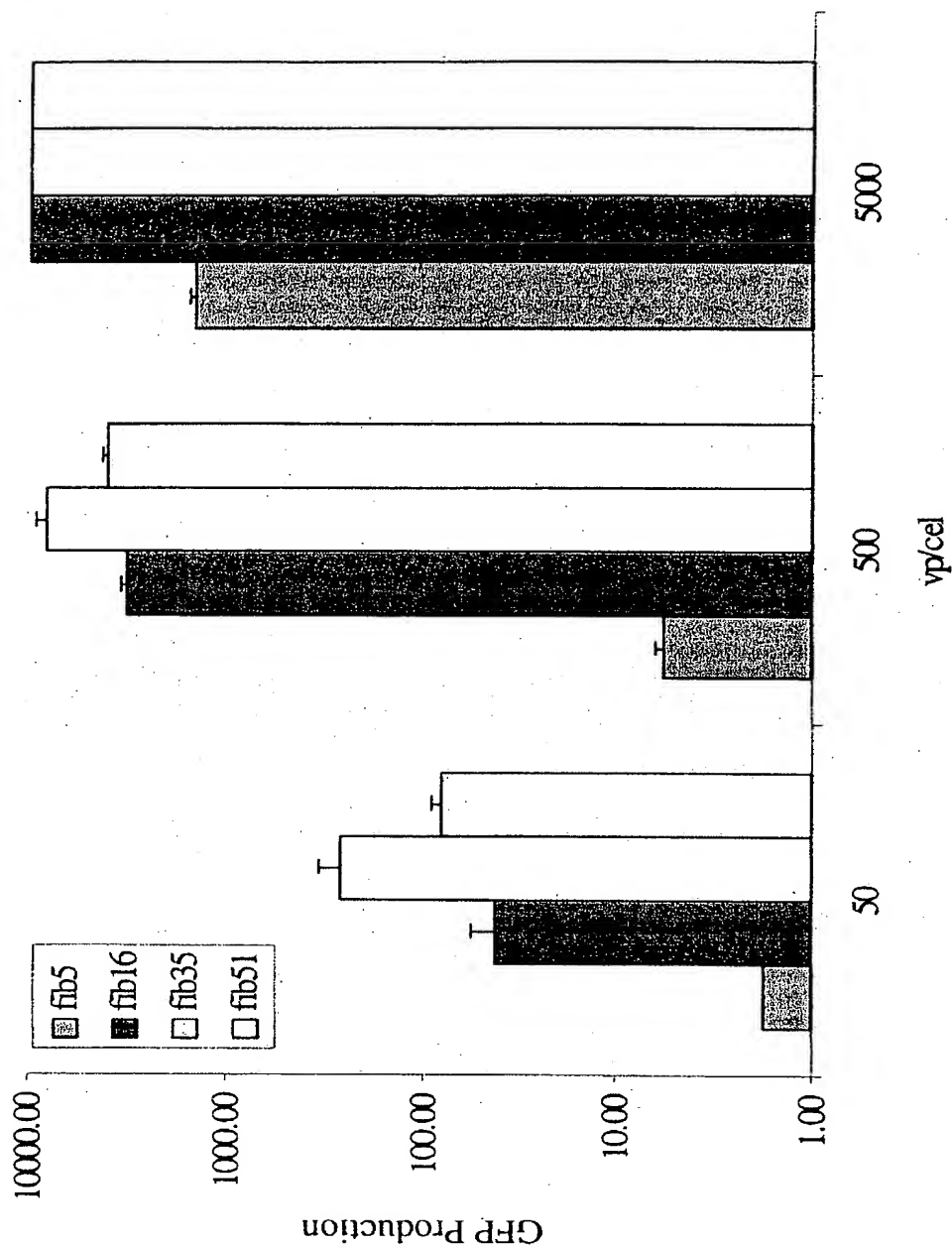
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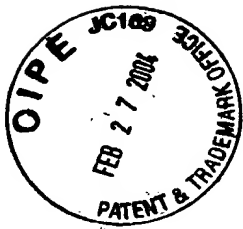
Docket No.: 2578-3982.2US

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FIG. 18B





TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

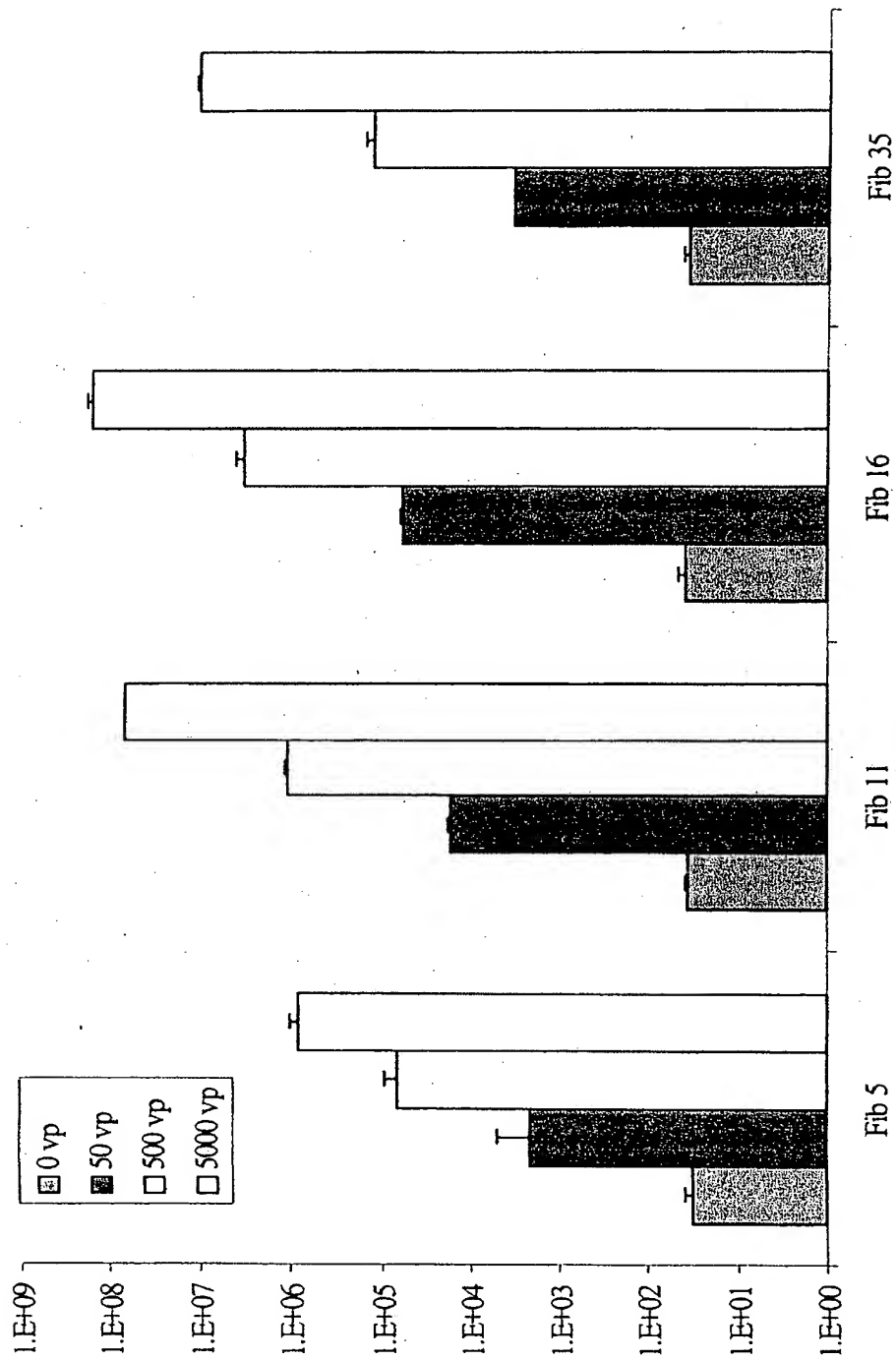
Inventor: Vogels et al.

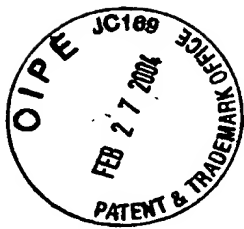
Serial No.: 09/517,898 Docket No.: 2578-3982.2US

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FIG. 19





TITLE: MEANS AND METHODS FOR FIBROBLAST-LIKE OR
MACROPHAGE-LIKE CELL TRANSDUCTION

Inventor: Vogels et al.

Serial No.: 09/517,898 Docket No.: 2578-3982.2US

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FIG. 20

